Job Risk Assessment (RA-02-3)

Document Control No.: *RA-02-3*	**Date Assessment Completed:** 8/28/2009	**Location:** Yerington Mine Site
Job Name: **Water Level Measurements**	**Job Description:** Manual water level measurements in project monitor wells using a water level probe attached to a spooled measuring tape/wire. In addition, select wells have permanently installed pressure transducers that continually record water level fluctuations and must have the data downloaded to a handheld computer.	**Risk Assessment Leader:** Penny Bassett **Risk Assessment Team:** Royanne Barringer, Briana Wright **SIMOPS:** ☐ Yes ☑ No **Designated PIC:**

Work Plan (List Job Steps) List the jobs required to complete the project scope in the sequence they are carried out.	Any tools or heavy equipment needed? If YES, What Type	Is this a SIMOP? If YES, Include in Mitigation Plan.	Do any of the *Golden Rules of Safety* apply? If YES, Which of the 8?	Which of the 8 energy or biological root sources could possibly be involved in this job?	**What** would be the result of exposure to a biological or energy source? (e.g., Bites, Slips, trips falls, exposures, electrocution, injury, death, etc.); and **How, where, or when** could an uncontrolled release or unwanted contact with a biological or energy source occur? **Note:** Humans are biological sources, and their physical abilities, competency, and training should also be considered here.	Environmental Impacts Could there be a release to the air, soil or water, and or, will a waste be generated? If YES, What?	Pre-Mitigation Risk Evaluation Frequency	Consequence	Likelihood	Risk Score	Permit(s) Required? If YES, What kind?	Energy / Biological / Waste Management Plan List control measures required to eliminate, control, or protect against unwanted contact with an uncontrolled biological or energy source to minimize the risk of injury or environmental Impact. **Hierarchy of Controls:** Elimination, Substitution, Isolation, Engineering/ Administrative, PPE	Who is responsible for Hazard Mitigation? Name or Title	Post-Mitigation Risk Evaluation Frequency	Consequence	Likelihood	Risk Score
A. Load sampling supplies and drive to sampling location - Sample bottles - Cooler - Paperwork (COC, labels)	**Yes** Work truck	**No**	**Yes** Driving Safety	Motion Gravity	**Motion**… Walking trip/slip hazards. Driving hazard on public roads include potential collision or loss of control. Trip distance is short and at neighborhood speed so the hazard is less significant. Unsecured loads in pickup truck bed can shift and cause property damage or fly out of moving vehicle. **Gravity**… Lifting heavy items may cause back or other injury. Access in/out of truck be by climbing on tailgate could result in fall, sprain.	**No**	Frequent Exposure	Serious Consequence	Unusual but possible	**Substantial Risk**	**No**	**Motion**… Maintain good housekeeping in supplies storage and loading area, remove tripping hazards. Ensure items are securely stored to prevent movement during transport. **Gravity**… Use safe lifting techniques and get help for heavy/awkward lifts. Workers should use 3-point contact when getting in/out of truck bed and organize supplies to minimize need to enter.	Sample Technician	Frequent Exposure	Important Consequence	Remotely possible	**Minimal Risk**
B. Manual water level measurement - Open well lid - Spool water level probe down until water is contacted - Reel probe back up	**No**	**No**	**No**	Motion Chemical Biological	**Motion**… Lowering water level meter into well could cause hand injury from rotation of spool, nicks in metal spool or in plastic coat on wire. **Chemical**… Possible skin irritation from contact with contaminated groundwater. **Biological**… Spiders frequently nest inside the well monument and could bite and cause skin/allergic reaction. Other hazards include stinging insects, aggressive dogs, livestock, snakes.	**No**	Frequent Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**	**No**	**Motion**… Wear nitrile or leather gloves when handling the water level probe. **Chemical**… Decon the probe between each location using 3-step decon (alconox, tap water, distilled water). **Biological**… Wear leather or nitrile gloves when opening well lid, inspect inside and clear out cobwebs with a stick. Sand should be used to fill the space between the PVC well and the well monument to discourage spiders.	Sample Technician	Frequent Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**
C. Download transducer data - Connect "RuggedReader" to data cable - Start download program - Disconnect	**No**	**No**	**No**	Motion	**Motion**… Use of hands to connect the RuggedReader to the data cable. Walking between wells.	**No**	Frequent Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**	**No**	**Motion**… Very little potential for injury, use caution.	Sample Technician	Frequent Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**
D. Remove or install transducer in well (new installation or repair/ maintenance) - Hand lower transducer and data cable into well, avoid contact with dirt - Attach data cable to well cap with hanger - To remove, lift out by hand, avoid scraping data cable on well lip - Place plastic sheet on ground to minimize contact with dirt	**No**	**No**	**No**	Motion Gravity Chemical	**Motion**… Large sweeping vertical hand and shoulder motion to raise or lower transducer can result in fatigue and muscle soreness. **Gravity**… Loose uncontrolled length of data cable can create tripping hazard. **Chemical**… Contaminated groundwater may be present on the outside of a recently removed transducer.	**No**	Rare Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**	**No**	**Motion**… Take frequent breaks or have a partner to relieve you when fatigued. **Gravity**… Try to keep excess cable controlled by coiling as it is removed or designate the tarp as a no-walk area until the tripping hazard is picked up. **Chemical**… Decontaminate transducers after they are removed using alconox and water.	Sample Technician	Rare Exposure	Notable Consequence	Conceivable but unlikely	**Minimal Risk**
E. General field conditions	**No**	**No**	**No**	Thermal Electrical Biological	**Thermal**… Weather conditions (heat & cold) may cause worker heat stress, cold stress, or dehydration. **Electrical**… Thunderstorms with lightning could result in potential lightning strike because locations are exposed and well monument can add to risk. **Biological**... Stinging insects (bees, spiders), scorpions, snakes, or domestic or wild animals can cause minor or significant injuries.	**No**	Occasional Exposure	Very Serious Consequence	Remotely possible	**Low Risk**	**No**	**Thermal**… Workers shall discuss weather conditions in morning safety meeting and develop appropriate action plan or modified work schedule. Shade should be made available for hot weather days. Insullating coveralls or coat should be available for cold weather work. Workers should have an adequate supply of drinking water for the entire day. **Electrical**… the Field Manager (or other worker) shall call a STOP WORK when lightning is visible. Workers should move to safe location or stay inside truck until storm has passed. **Biological**... Inspect work area for biological hazards before setting up. If a hazard is present either reschedule for a later time, remove the hazard, wear insect spray, etc.	Sample Technician	Occasional Exposure	Important Consequence	Remotely possible	**Minimal Risk**